DOCUMENT RESUME

ED 177 437 CG 013 874

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TITLE Self-Schemata and the Processing of Attitudinal Information.
PUB DATE 4 May 79
NOTE 10p.; Paper presented at the Annual Meeting of the Midwestern Psychological Association (51st, Chicago, Illinois, May 3-5, 1979); Best copy available

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Abortions; *Cognitive Style; *Information Processing; Learning Processes; Memory; *Persuasive Discourse; Psychological Patterns; Recall (Psychological); Religious Factors; *Self Congruence; *Social Attitudes

ABSTRACT

A two-session experiment was conducted to test the relationship of self-schemata to the processing of attitudinal information. In Session I, subjects were classified as either Religious (n=20) or Legal (n=19) in their schemata, using weighted response times to personality trait words on slides. In Session II, these subjects heard one of four tapes. Two Topics (Capital Punishment and Abortion) were crossed with two Message Perspectives (Religious and Legal) to produce these tapes. After listening to the message, subjects rated the message's persuasiveness, listed their thoughts during the tape, and responded to a surprise memory recognition test. As predicted, individuals whose self-schemata were congruent with the message perspective found the tapes more persuasive. This effect was strongest for the topic of Capital Punishment. Only when the topic was Capital Punishment did the same Schema x Message Perspective interaction result in (a) more thoughts listed, (b) greater reliance upon the content of the message, and (c) more topic-relevant thoughts. Biased recall of unpresented, but schema-related, arguments was not found. Two theoretical models for explaining the data are discussed. (Author)

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# Self-Schemata and the Processing of Attitudinal Information

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CG013874

Running Head: Self-Schemata

Paper Presented at the annual meeting of the Midwestern Psychological Association, Chicago, May 4, 1979.

# Self-Schemata and the Processing of Attitudinal Information

In 1977, Hazel Markus published the article "Self-schemata and processing information about the self." She defined self-schemata as "cognitive generalizations about the self, derived from past experience, that organize and guide the processing of self-related information contained in the individual's social experiences" (p. 64). Using the traits of Dependence and Independence, she discovered that her subjects used the self-schemata as the basis for future judgments, decisions, inferences and predictions about the self.

Cantor and Mischel (1977), that same year, published an article demonstrating that personality traits act as conceptual schemata or prototypes. In their study, fictitious characters were described, implicitly or explicitly, as Introverted or Extraverted. When given a recognition memory test, their subjects exhibited significantly biased recognition toward conceptually related trait words, even though these had not been previously presented in the descriptions of the fictitious characters. These researchers concluded that the traits of introversion and extraversion act as prototypes or normative conceptual schemata, analogous to the simple prototypes abstracted from random dot patterns (Posner & Keele, 1968, 1970), from line-drawn faces (Reed, 1972) and letter-number combinations (Reitman & Bower, 1973). After the subjects had abstracted the appropriate trait impressions from the conceptually consistent material at input, they exhibited a memory bias consistent with the trait prototypes, expressing greater confidence that they had seen non-presented but conceptually related material, as opposed to nonpresented, unrelated material.

Self-schemata affect on-going information processing as well as memorial processing. For instance, Tesser and Leone (1977) demonstrated that stimuli which were congruent with a person's self-schema elicited greater thought and more polarized evaluations than those which were incongruent. Male subjects reported thinking more about football stimuli, thinking about more different aspects of the stimuli, found less difficulty in rating these stimuli, etc., than did females. Moreover, when these subjects were given time to think about the stimuli, their evaluations became more polarized. On the other hand, female subjects demonstrated this pattern of information processing when the stimuli were fashions and, presumably, in accord with their self-schemata as females.

Our aim was to investigate the implications of these findings for attitude processing and change. McGuire (1968) proposed an ideographic information processing model of persuasion. His basic notion was that the individual differences in the manner and extent of processing attitudinal information accounts for differences in susceptibility to persuasion. Equivalently, we hypothesized that a person with a particular schema of the self would be most able to comprehend and elaborate upon message arguments which accorded with this schematic perspective. Through pilot-testing, strong versions of persuasive messages were developed to elicit cognitive elaboration and acceptance. We expected more topic-relevant thoughts and greater persuasion when the message perspective and the person's self-schema coincided, versus when they were diverse. A second major hypothesis, based on previous findings in the articles cited above, was that the participants in our study would falsely recognize more arguments in accord with their person-

al schemata as being previously heard, though they had not been, during the memory recognition test.

Our experiment consisted of two sessions. Session I served to classify participants as either Religious or Legal in their self-schemata and to assess their original positions toward the two topics employed, viz., Capital Punishment and Abortion. Session II, conducted one week later, tested our hypotheses. Participants believed the two sessions were independent experiments. They were told that the first was to develop selection procedures for a future Congressional Issues Seminar, while the second was to develop methods of presenting information in this seminar. Two experimenters were used.

During Session I, subjects individually viewed 30 slides each containing a single personality trait word. Pilot testing had rated 15 of these adjectives as descriptive of a Religious-minded person and 15 as descriptive of a Legal-minded person. Subjects responded by pressing one of two buttons: a "me" button, indicating the adjective was self-descriptive or a "not me" button, indicating the adjective was non-self-descriptive. Response times for each slide were recorded by the experimenter.

Classification of the subjects was done by weighting the response times for the two sets of 15 adjectives and then subtracting the Legal word total from the Religious word total. More specifically, individualized ranges for response times were determined. These ranges were then divided into five units. Fastest response times received a weighting of 5, while the slowest received a weight of 1. We derived this procedure from Markus's (1977) finding that self-descriptive, schema-related items showed the fastest response times.

Using these weighted difference scores, our 63 subjects were divided

into three groups. The highest one-third was designated the Religious-schema group and the lowest one-third, the Legal-schema group. In Session II, there were 20 subjects in the Religious-schema group and 19 in the Legal-schema group.

Four tapes, two for each topic, were prepared. One tape per topic was Religious in perspective, while the other was Legal in perspective. Each tape contained five schematic arguments and three Neutral arguments. Pilot testing of the individual arguments was performed to establish the arguments' orientation and persuasive comparability. All of the tapes were cast in the same format, a television interview with a United States Representative who chaired a subcommittee dealing with the particular topic. The tapes were of equal length, approximately three minutes long.

During Session II, subjects were randomly assigned, within groups, to hear one taped message. This they did through earphones while seated at individual carrels. Immediately after hearing the tape, subjects rated a series of items related to the communicator and the communication. One of these items was a measure of the tape's persuasiveness. Afterward, the subjects listed the thoughts which they had had while listening to the tape (Petty & Cacioppo, 1977). Next they were given a surprise recognition test consisting of six Religious, six Legal and six Neutral arguments. Each subject would have heard only three schematic arguments and three Neutral arguments among these 18.

Analyses of variance were conducted on the 2 x 2 x 2 between subjects factorial design. This involved 2 Schemata (Relgious vs. Legal), 2 Topics (Abortion vs Capital Punishment) and 2 Message Perspectives (Religious vs. Legal).

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Insert Table 1 about here

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Means for persuasiveness of the taped message and the three measures of thought listings are presented in the table (Table 1). In the first part of the table, the lower means represent a higher degree of rated persuasiveness. A significant interaction of Schema x Message Perspective was obtained on this measure ($F = 4.94$, $p < .03$). No other main or interaction effects were found to be significant. This result indicates that subjects whose self-schemata agreed with the message perspective found the communication more persuasive. Consequently, our hypothesis was supported in this regard.

Next in the tabel are the means for the total number of thoughts listed; the Message-Originated Thoughts, i.e., those which quoted or paraphrased the arguments heard; and, the Message-Topic Thoughts, i.e., those which were topic relevant or had the topic as their object. A significant 3-way interaction was obtained for each of these measures ($F = 5.98$, $p < .02$; $F = 4.35$, $p < .045$; $F = 6.25$, $p < .02$, respectively). Further analyses revealed a Schema x Message Perspective interaction occurred only for the topic of Capital Punishment on each of these measures. Hence, for this topic when subjects' schemata and the message perspective coincided, subjects (a) produced more thoughts ($F = 8.90$, $p < .01$); (b) cited or paraphrased more of the arguments ($F = 7.16$, $p < .025$); and, (c) had more thoughts directly related to the particular topic ($F = 12.46$, $p < .01$). To this extent, our hypothesis was again confirmed.

Why this pattern was not observed for the topic of Abortion is at this point a matter of conjecture. Our surmise is that it has to do with the fact that our research was conducted at a predominantly Catholic university. Most of the subjects would have been exposed to strong anti-abortion arguments before. This fact may have caused some type of interaction with the subjects' self-schemata and affected the number and kind of thoughts generated.

No pattern of biased recall was observed in the results from the memory

recognition test.

At least two theoretical models can account for the findings presented by this research. One is a cognitive consistency model and the other is a cognitive elaboration model. Cognitive consistency would assert that a positive association exists between the individual arguments and the particular position advocated by the message. When a positive association also exists between a person's self-schema and the individual arguments, i.e., when schema and argument orientation are congruent, cognitive consistency would be achieved by adoption of the advocacy. On the other hand, when there is incongruency, no observable attitude change would be predicted.

Cognitive response theory represents a cognitive elaboration model. Schemata, according to this theory, make available to the person an enriched resevoir of associations, inferences, thoughts, etc. Consequently, when a schema is activated and accords with the stated position of the advocacy, greater cognitive complexity is provided the individual for information processing. This means that the person will be better able to comprehend, evaluate, and elaborate upon, the argumentation. The more positive this elaboration, the more favorable the associations, inferences, thoughts, etc., generated, the higher the probability of attitude change. But, when a contrary schema is activated the rich medium for processing is absent or diminished. Because of this, less elaboration is possible and less attitude change is predicted. Consistent with these notions of cognitive response theory, we found the dominant response to be proadvocacy, rather than counteradvocacy.

References

Cantor, N., & Mischel, W. Traits as prototypes: effects on recognition memory. Journal of Personality and Social Psychology, 1977, 35, 38-48.

Markus, H. Self-schemata and processing information about the self. Journal of Personality and Social Psychology, 1977, 35, 63-78.

McGuire, W. J. The nature of attitudes and attitude change. In G. Lindzey & E. Aronson (Eds.) The Handbook of Social Psychology. Vol. 3. Reading, Mass.: Addison-Wesley, 1969.

Petty, R. E., & Cacioppo, J. T. Forewarning, cognitive responding, and resistance to persuasion. Journal of Personality and Social Psychology, 1977, 35, 645-655.

Posner, M. I., & Keele, S. W. On the genesis of abstract ideas. Journal of Experimental Psychology, 1968, 77, 353-363.

Posner, M. I., & Keele, S. W. Retention of abstract ideas. Journal of Experimental Psychology, 1970, 83, 304-308.

Reed, S. K. Pattern recognition and categorization. Cognitive Psychology, 1972, 3, 382-407.

Reitman, J. S., & Bower, G. H. Storage and later recognition of exemplars of concepts. Cognitive Psychology, 1973, 4, 192-206.

Tesser, A., & Leone, C. Cognitive schemas and thoughts as determinants of attitude change. Journal of Experimental Social Psychology, 1977, 13, 340-356.

Table 1

Mean Scores on Persuasiveness of Tape and Three Measures of Listed Thoughts---Total Number of Thoughts, Message-Originated and Message-Topic[a]

| Schema | Topic Perspective | Abortion | | Capital Punish. | |
|---|---|---|---|---|---|
| | | Relig. | Legal | Relig. | Legal |
| **Persuasiveness of Tape[b]** | | | | | |
| Religious | | 3.80 | 4.00 | 2.83 | 3.20 |
| Legal | | 4.17 | 2.80 | 5.20 | 2.33 |
| **Total Number of Thoughts[c]** | | | | | |
| Religious | | 5.40 | 5.83 | 5.50 | 4.40 |
| Legal | | 5.25 | 5.00 | 5.20 | 8.33 |
| **Message-Originated Thoughts[c]** | | | | | |
| Religious | | .20 | .50 | 1.33 | .20 |
| Legal | | .75 | .80 | .00 | 1.33 |
| **Message-Topic Thoughts[c]** | | | | | |
| Religious | | 4.20 | 3.67 | 3.50 | 2.80 |
| Legal | | 3.75 | 3.20 | 2.60 | 7.33 |

[a] Cell means are based on the following:

| | Abortion | | Capital Punish. | |
|---|---|---|---|---|
| | Relig. | Legal | Relig. | Legal |
| Religious | n= 5 | n= 4 | n= 6 | n= 5 |
| Legal | n= 6 | n= 5 | n= 5 | n= 3 |

[b] Lower means equal greater degree of persuasiveness.

[c] Higher means equal greater number of thoughts.